

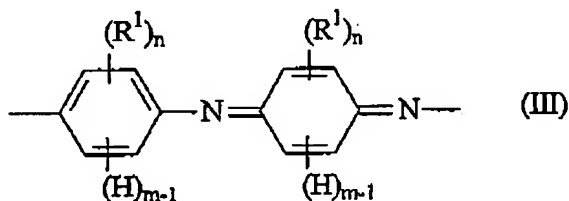
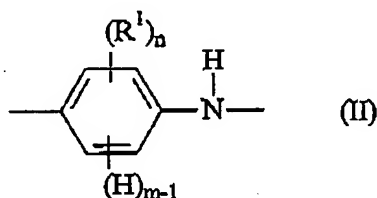
Application No.: 10/669,577
Docket No.: UC0223USNA

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APR 29 2008

Listing of Claims

1. (Original) A composition comprising an aqueous dispersion of a polyaniline and at least one colloid-forming polymeric acid.
2. (Original) A composition according to claim 1, wherein said polyaniline has aniline monomer units having a formula selected from Formula II below and Formula III.



wherein:

n is an integer from 0 to 4;

m is an integer from 1 to 5, with the proviso that $n + m = 5$; and

R^1 is independently selected so as to be the same or different at each occurrence and is selected from alkyl, alkenyl, alkoxy, cycloalkyl, cycloalkenyl, alkanoyl, alkylthio, aryloxy, alkylthioalkyl, alkylaryl, arylalkyl, amino, alkylamino, dialkylamino, aryl, alkylsulfinyl, alkoxyalkyl, alkylsulfonyl, arylthio, arylsulfinyl, alkoxycarbonyl, arylsulfonyl, carboxylic acid, halogen, cyano, or alkyl substituted with one or more of sulfonic acid, carboxylic acid, halo, nitro, cyano or epoxy moieties; or any two R^1 groups together may form an alkylene or alkenylene chain completing a 3, 4, 5, 6, or 7-membered aromatic

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or alicyclic ring, which ring may optionally include one or more divalent nitrogen, sulfur or oxygen atoms.

3. (Original) A composition according to claim 2, wherein m is 5.

4. (Original) A composition according to claim 1, wherein said colloid-forming polymeric acid is selected from polymeric sulfonic acids, polymeric carboxylic acids, polymeric acrylic acids, polymeric phosphoric acids, and mixtures thereof.

5. (Original) A composition according to claim 1, wherein said polymeric acid comprises a polymeric sulfonic acid.

6. (Original) A composition according to claim 5, wherein said polymeric sulfonic acid is fluorinated.

7. (Original) A composition according to claim 5, wherein said polymeric sulfonic acid is perfluorinated.

8. (Original) A composition according to claim 5, wherein said polymeric sulfonic acid is a perfluoroalkylenesulfonic acid.

9. (Original) A composition according to claim 8, wherein said polymeric sulfonic acid is perfluoroethylenesulfonic acid.

10. (Original) A buffer layer comprising polyaniline and a colloid-forming polymeric acid.

11. (Original) A buffer layer made from an aqueous dispersion of a polyaniline and at least one colloid-forming polymeric acid.

12. (Original) A buffer layer according to claim 11, wherein the aqueous dispersion has a pH greater than 3.5.

13. (Original) A buffer layer according to claim 11, wherein the aqueous dispersion has a pH greater than 5.

14. (Original) A buffer layer according to Claim 11, wherein said colloid forming polymeric acid is selected from polymeric sulfonic acids, polymeric carboxylic acids, polymeric phosphoric acids, polymeric acrylic acids, and mixtures thereof.

15. (Original) A buffer layer according to Claim 14, wherein said polyaniline is unsubstituted and said colloid-forming polymeric sulfonic acid is fluorinated.

16. (Original) A buffer layer according to Claim 15, wherein said colloid-forming polymeric sulfonic acid is perfluoroethylene sulfonic acid.

17. (Original) An organic electronic device comprising a buffer layer according to Claim 10 or 11.

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18. (Original) An electronic device according to Claim 17, wherein the device is an electroluminescent device.

19. (Original) A thin film field effect transistor comprising at least one electrode comprising a polyaniline and a colloid-forming polymeric acid.

20. (Original) A thin film field effect transistor according to Claim 19, wherein said electrode further comprises metal nanowires or carbon nanotubes.

21. (Original) A thin film field effect transistor according to Claim 19, wherein at least one electrode is selected from gate electrodes, drain electrodes, and source electrodes.

22. (Original) A buffer layer according to Claim 14, wherein said polyaniline is unsubstituted and said colloid-forming polymeric sulfonic acid is perfluorotheylenesulfonic acid.

23-43. (Canceled)

44. (Original) A composition comprising an aqueous dispersion of a polyaniline, at least one colloid-forming polymeric acid, and an additional material selected from polymers, dyes, coating aids, carbon nanotubes, metal nanowires, organic and inorganic conductive inks and pastes, charge transport materials, crosslinking agents, and combinations thereof.

45. (Original) A composition according to Claim 44 wherein the additional material is a polymer selected from polythiophenes, polyanilines, polypyrroles, polyamines, polyacetylenes, and combinations thereof.

46. (Original) An organic light-emitting diode comprising a first buffer layer positioned between an anode and a light-emitting layer, wherein the buffer layer comprises a polyaniline and at least one colloid-forming polymeric acid.

47. (Original) An organic light-emitting diode according to Claim 46, further comprising a second buffer layer directly adjacent to the first buffer layer.

48. (Original) An organic light-emitting diode according to Claim 47, wherein the second buffer layer comprises a conductive polymer selected from polythiophenes, polyanilines, polypyrroles, polyamines, polyacetylenes, and combinations thereof.

49. (Original) An organic light-emitting diode according to Claim 48, wherein the first buffer layer is directly adjacent to the anode.

50. (Original) A multicolor display device comprising a multiplicity of at least two types of sub-pixels, each of which comprises an anode, a buffer layer, a light-emitting

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material layer, and a cathode, wherein the buffer layer in each sub-pixel comprises a polyaniline and at least one colloid-forming polymeric acid, and further wherein the cathode in each sub-pixel of the device is substantially the same.

51. (Original) An organic electronic device comprising a buffer layer cast from an organic aqueous dispersion of polyaniline and at least colloid-forming polymeric acid.

52. (Original) The device of Claim 51, wherein the one polyaniline has the structure of Claim 2, and the polymeric acid is selected from the group consisting of sulfonic acids, phosphoric acids, carboxylic acids, acrylic acids and mixtures thereof.

53. (Original) The device of Claim 51 wherein said device is a photosensor, photoswitch, phototransistor, biosensor, phototube, IR detectors, photovoltaic device, solar cell, biosensors, light-emitting diode, light-emitting diode display, or diode laser.